

set  $T(k) = -Q(k-1) + T(k-1)$ .

Insert equation (5) into (2) to get

$$D(k) = (-Q(k-1) + T(k-1)) - T(k-1) = -Q(k-1) \quad (6)$$

to provide the specification for the diversity phase at time k.]

6. (amended) The method of Claim 5 wherein said control signals for said adaptive optic device are determined according to [the following] a predetermined control equation [:]

$$[T(k) = T(k-1) + D(k) \quad (7)].$$

Remarks: ✓

The Examiner objected to the Claims for the reasons given in paragraphs 2-5 of his recent Office Action.

A Substitute Specification has been included to obviate the reasons for the rejection in paragraph 2 thereof, and Claims 2,5 are amended according to the Examiner's requirements in paragraphs 3-5.

The Examiner rejected Claims 2,3,5,6 under 35USC 112 for reasons given in paragraphs 6-8, thereof.

These Claims are amended to obviate the reasons for the Examiner's rejections.

The Examiner rejected Claims 1 and 4 under 35USC 102 in view of Love et al for the reasons given in paragraph 10 of his Office Action.

Claims 1 and 4 now call for "solely in-focus images" to clearly distinguish over the teachings of Love et al., Col. 3, beginning at line 9, wherein "in-focus and out of focus" images are disclosed.

The Examiner rejected the Claims under 35USC102 over Wirth et al for the reasons given in paragraph 11 of his Office Action.

The Examiner will note that Wirth et al requires the use of a linear array of sub apertures (item 172, Figs. 1 and 2) and Col.2, beginning at line, 36, wherein "responds to signals from detector array 172 to generate a corresponding set of control signals for a corresponding set of actuators in mirror 200"

No such array is required with the sequential diversity imaging apparatus according to the invention.

The Examiner further rejected Claims 2,3,5,6 under 35USC103 as unpatenable over Love et al for the reasons given in paragraph 13 of his Office Action. It was the opinion of the Examiner that it would have been obvious to program the Love et al processor to compensate for errors of aberrations within the wavefront.

Applicant respectfully submits that the use of both in-focus and out of focus images would require substantial modification to Applicant's equipment and programs to achieve the desired effects.

Applicant further submits that the prior art listed in paragraph 14 of the Examiner's Office Action, although relevant do not teach, show or suggest the adaptive optic device, in optical proximity with receiving means for canceling aberrations introduced by the medium to thereby provide solely adapted in-focus images of the object, a detector array arranged for receiving the solely adapted in-focus images and producing digital image representations thereof, and a sequential diversity processor connecting with the detector array and the adaptive optic device for receiving the digital image representations from the detector array and providing sequential control signals to the adaptive optic device to enable the adaptive optic device to cancel said aberrations as specifically disclosed and claimed by Applicant.

Applicant respectfully submits that the Claims have been amended to obviate the reasons for rejection and are now in condition for allowance.

Applicant requests allowance of amended Claims 1-6 by the Examiner in his next Office Action.

Respectfully submitted

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